

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Greg Benson; Gregory H. Ulrich; Christopher L. Knauff
Assignee: Macrovision Corporation
Title: METHOD AND SYSTEM FOR MANAGING A DATA OBJECT SO
AS TO COMPLY WITH PREDETERMINED CONDITIONS FOR
USAGE
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AMENDMENT

Dear Sir:

Applicants submit the following amendments and remarks.

LAW OFFICES OF
MACPHERSON KWOK
CHEN & BYRD LLP

2402 MICHELSON DR.
SUITE 210
IRVINE, CA 92612
(949) 752-7040
FAX (949) 752-7049

v.1

IN THE CLAIMS

Please cancel Claims 55-63, 67-74, 77-78, 81-82, 86-87, and 96-150.

1. (original) A method of managing a data object so as to comply with control conditions for usage of the data object, comprising:

storing a data object in the memory of a data object provider processor;
providing a variable number of control conditions for usage of the data object;
providing a general set of control data for the data object based on the variable number of control conditions for usage, the general set of control data comprising at least one or more usage control elements defining usages of the data object which comply with the variable number of control conditions; and

encrypting at least the data object to create a secure data package so that it is ready to transfer to a user data processor.

2. (original) The method of Claim 1, additionally comprising encrypting together the data object and the general set of control data.

3. (original) The method of Claim 1, wherein providing the general set of control data includes providing an identifier which uniquely identifies the general set of control data.

4. (original) The method of Claim 1, wherein providing the general set of control data includes providing a security control element which identifies a security process to be applied before usage of the data object is allowed.

5. (original) The method of Claim 1, wherein providing the general set of control data includes providing a format control element which identifies the format of the control data.

6. (original) The method of Claim 1, additionally comprising:

receiving a request for authorization for usage by a user,
comparing the usage for which authorization is requested with the one or more usage control elements of the general set of control data; and

granting the authorization if the usage for which authorization is requested complies with the usages defined by the one or more usage control elements.

7. (original) The method of Claim 6, additionally comprising requiring payment for the requested authorization for usage before granting the authorization.

8. (original) The method of Claim 1, additionally comprising:
transmitting the secure data package into the data processor;
checking, in response to a request by a user for usage of the data object, whether the requested usage complies with the usage defined by the at least one usage control element of the general set of control data; and

decrypting, in response to the requested usage complying with the usage defined by the at least one usage control element of the general set of control data, the data object so as to enable the requested usage.

9. (original) The method of Claim 8, additionally comprising:
combining, after the usage of the data object, the data object and the one or more usage control elements; and
reencrypting at least the data object.

10. (original) A method of controlling the usage by a user of a data object so as to comply with control conditions for usage of the data object, comprising:

providing a variable number of control conditions for usage of the data object;
providing a data object and control data, which comprises at least one usage control element defining a usage of the data object which complies with the variable number of control conditions, the data object being encrypted;

receiving a request by the user for usage of the data object;

checking, in response to the request by the user for usage of the data object, whether the requested usage complies with the usage defined by the at least one usage control element of the control data; and

decrypting, in response to the requested usage complying with the usage defined by the at least one usage control element of the control data, the data object and enabling the requested usage.

11. (original) The method of Claim 10, wherein the usage control element is updated after the at least one usage of the data object.

12. (original) The method of Claim 10, wherein the control data comprises an indication of the number of times the user is authorized to use the data object in accordance with the at least one usage control element, wherein the requested usage of the data object is only enabled when the number of times is one or more, and wherein the number of times is decremented by one when the requested usage is enabled.

13. (original) The method of Claim 10, wherein the control data comprise a security control element, and additionally comprising executing, before each usage of the data object, a security procedure defined in the security control element.

14. (original) The method of Claim 10, wherein checking whether the requested usage complies with the usage defined by the at least one usage control element, comprises checking that a data processor is capable of executing a security procedure specified in a security control element of the at least one usage control element, and if not, disabling the usage.

15. (original) The method of Claim 10, additionally comprising:
combining, after the usage of the data object, the data object and the one or more usage control elements; and
reencrypting at least the data object.

16. (original) A system for managing a data object so as to comply with control conditions for usage of the data object, comprising:

a user interface module which receives a variable number of control conditions;

a packaging module which provides a general set of control data for the data object based on the variable number of control conditions for usage, the general set of control data comprising at least one or more usage control elements defining usages of

the data object which comply with the variable number of control conditions and which packages the general set of control data; and

an encrypting module which encrypts the data object to create a secure data package, which is ready for transfer to a user.

17. (original) The system of Claim 16, wherein the general set of control data comprises a control data element which controls further distribution of the data object.

18. (original) The system of Claim 16, wherein one of the usage control elements includes a security control element that defines a security procedure.

19. (original) A system for controlling the usage by a user of a data object so as to comply with control conditions for usage of the data object, comprising:

a usage manager module which receives a variable number of control conditions, checks whether a usage requested by the user complies with the usage defined by at least one usage control element that complies with the variable number of control conditions, and disables the usage requested by the user when the usage does not comply with the usage defined by the at least one usage control element; and
a decryption module which decrypts the data object, responsive to the check for requested usage by the usage manager module.

20. (original) The system of Claim 19, wherein one of the usage control elements includes a security control element that defines a security procedure.

21. (original) The system of Claim 20, wherein the security procedure is an RSA encryption algorithm.

22. (original) The system of Claim 19, wherein the usage manager module encrypts the data object after usage.

23. (original) A method of controlling the usage by a user of data objects so as to comply with a variable number of conditions for usage of the data objects, comprising:

providing at least two data packages, each data package comprising a data object and a user set of control data, which comprises at least one usage control element defining a usage of the data object which complies with the variable number of conditions, the data object being encrypted;

examining the usage control elements of the at least two data packages to find a match; and

performing an action being specified in the user sets of control data of the at least two data packages.

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24. (original) The method of Claim 23, wherein one of the at least two data packages is a sell order, and wherein one of the at least two data packages is a buy order.

25. (original) The method of Claim 23, additionally comprising checking whether a data processor is capable of executing a security procedure specified in a security control element of the at least one usage control element, and disabling the usage when the data processor is not capable of executing the security procedure, and decrypting the data objects.

26. (original) The method of Claim 25, additionally comprising:
updating the at least one usage control element of each data package; and
reencrypting each of the data object.

27. (original) A method of managing a data object so as to comply with a variable number of control conditions for usage of the data object, comprising:

providing variable control conditions for usage of the data object;

providing a general set of control data for the data object based on the variable control conditions for usage, the general set of control data comprising at least one or more usage control elements defining usages of the data object which comply with the variable control conditions;

providing, in response to a request for authorization for usage of the data object by a user, a user set of control data, which comprises at least a subset of the general set of control data, including at least one of the usage control elements;

encrypting at least the data object to create a secure data package; and

checking, before allowing transfer of the data package to the user, that the request for authorization for usage of the data object has been granted.

28. (original) The method of Claim 27, additionally comprising checking whether a data processor is capable of executing a security procedure specified in a security control element of the at least one usage control element, and disabling the usage when the data processor is not capable of executing the security procedure.

29. (original) The method of Claim 27, wherein the data object is composed of at least two constituent data objects and wherein the user set of control data, in response to a request for authorization for usage of one of the constituent data objects by a user, is created only for that constituent data object and combined only with a copy of that constituent data object.

30. (original) The method of Claim 27, wherein the request for authorization is received from a user via a data network.

31. (original) The method of Claim 27, wherein the data object is a composite data object including at least two constituent data objects, and wherein providing a general set of control data comprises providing a respective general set of control data for each of the constituent data objects and the composite data object, and wherein providing a user set of control data comprises providing a respective user set of control data for each of the constituent data objects and the composite data object.

32. (original) The method as defined in Claim 27, additionally comprising storing the user set of control data in a processor of a data object provider.

33. (original) The method as defined in Claim 27, additionally comprising:
transmitting the data package;

checking, in response to a request by the user for usage of the data object, whether the requested usage complies with the usage defined by the at least one usage control element of the user set of control data; and

decrypting, in response to the requested usage complying with the usage defined by the at least one usage control element of the user set of control data, the data object and enabling the requested usage.

34. (original) The method of Claim 27, additionally comprising:
transmitting the data package; and
reencrypting the data object.

35. (original) A system for managing a data object so as to comply with control conditions for usage of the data object, comprising:

a packaging module which provides a general set of control data for the data object based on variable conditions for usage, the general set of control data comprising at least one or more usage control elements defining usages of the data object which comply with the variable conditions and which combines the user set of control data with the data object, and wherein the packaging module provides in response to a request for authorization for usage of the data object by a user, a user set of control data, which comprises at least a subset of the general set of control data, which subset comprises at least one of the usage control elements;

an encrypting module which encrypts the data object to create a secure data package, which is ready for transfer to a user; and

a control module which checks that the request for authorization for usage of the data object has been granted before allowing transfer of the data package to the user.

36. (original) A method of managing a data object so as to comply with control conditions for usage of the data object, comprising:

providing a general set of control data for the data object based on a variable number of control conditions for usage, the general set of control data comprising at least one or more usage control elements defining usages of the data object which comply with the variable number of control conditions; and

encrypting at least the data object to create at least one secure data package, which is ready for transfer to a user.

37. (original) The method of Claim 36, wherein the data object and the usage control elements are encrypted into a single secure package.
38. (original) The method of Claim 36, wherein providing the general set of control data includes providing a security control element which identifies a security process to be applied before usage of the data object is allowed.
39. (original) The method of Claim 36, wherein providing the general set of control data includes providing a format control element which identifies the format of the control data.
40. (original) The method of Claim 36, additionally comprising:
 receiving a request for authorization for usage by a user;
 comparing the usage for which authorization is requested with the one or more usage control elements of the general set of control data; and
 granting the authorization if the usage for which authorization is requested complies with the usages defined by the one or more usage control elements.
41. (original) A method of managing a data object at a data provider computer so as to comply with control conditions for usage of the data object, comprising:
 providing a variable set of control data for the data object, the variable set of control data including usage information regarding the data object;
 concatenating the variable set of control data with the data object; and
 encrypting at least the data object to create at least one secure data package that is ready for transmission to a user data processor.
42. (original) The method of Claim 41, wherein the encrypting includes storing the at least one secure data package at the data provider computer.
43. (original) A method of managing a data object at a data provider computer so as to comply with control conditions for usage of the data object, comprising:

providing a set of control data for the data object based on a variable number of control conditions for usage, the set of control data including usage information regarding the data object;

combining the set of control data with the data object; and

encrypting at least the data object to create at least one secure data package, so that the at least one secure data package is stored in the data provider computer.

44. (original) The method of Claim 43, additionally comprising transmitting the at least one secure data package to the user data processor.

45. (original) The method of Claim 43, wherein the data object comprises digital money.

46. (original) The method of Claim 43, wherein the data object comprises an empty file.

47. (original) The method of Claim 43, wherein the data object is created by an author.

48. (original) A method of managing a data object so as to comply with control conditions for usage of the data object, comprising:

storing a data object in the memory of a data object provider processor;

providing a variable number of control conditions for usage of the data object;

and

providing a set of control data for the data object based on the variable number of control conditions for usage, the set of control data comprising at least one or more usage control elements defining usages of the data object which comply with the variable number of control conditions.

49. (original) The method of Claim 48, additionally comprising:
transmitting the data object and the set of control data into a data processor;
and

checking, in response to a request by a user for usage of the data object, whether the requested usage complies with the usage defined by the at least one usage control element of the set of control data; and

complying with the usage defined by the at least one usage control element of the set of control data so as to enable the requested usage.

50. (original) The method of Claim 49, additionally comprising combining, after the usage of the data object, the data object and the one or more usage control elements.

51. (original) The method of Claim 49, wherein the data object comprises digital data.

52. (original) The data object of Claim 49, wherein the control data comprises an object identifier.

53. (original) The data object of Claim 49, wherein the data object comprises a video file.

54. (previously canceled)

55. - 63. (canceled)

64. - 66. (previously canceled)

67. - 74. (canceled)

75. - 76. (previously canceled)

77. - 78. (canceled)

79. - 80. (previously canceled)

81. - 82. (canceled)